



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,531	11/28/2007	Kiyoshi Tateishi	46969-5453	4675
55694 7590 09/02/2009 DRINKER BIDDLE & REATH (DC) 1500 K STREET, N.W. SUITE 1100 WASHINGTON, DC 20005-1209				
EXAMINER				
DOAK, JENNIFER L				
ART UNIT		PAPER NUMBER		
2872				
MAIL DATE		DELIVERY MODE		
09/02/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/594,531

Applicant(s)

TATEISHI ET AL

Examiner

Jennifer L. Doak

Art Unit

2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 6/1/09.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 1-4, 10 and 11 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 5-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 September 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date 10/30/07.
- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Applicant's election of species I in the reply filed on 6/1/09 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Claims 1-4, 10-11 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to one or more non-elected inventions, there being no allowable generic or linking claim.

Specification

The title of the invention is not sufficiently descriptive. "The title should be brief but technically accurate and descriptive and should contain fewer than 500 characters," MPEP §606. Specifically, statements concerning the general type or nature of the entire system or its components that are common to many other similar elements or systems that are known in the art are not sufficiently descriptive to provide "informative value in indexing, classifying, searching, etc.," MPEP §606.01. Examiner recommends directing the title to what Applicant believes is the point of novelty, including key structural features, since it is by the novelty that "indexing, classifying, searching, etc." is generally accomplished. Nevertheless, it should be noted that, pursuant to MPEP §606.01, "[i]f a satisfactory title is not supplied by the applicant, the examiner may, at the time of allowance, change the title by examiner's amendment."

A new title is required that is more clearly indicative of the invention to which the claims are directed.

Drawings

Figures 1 and 2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

Claims 5-9 are objected to because of the following informalities: claim 1, line 1 reads, "A hologram apparatus *provided with* ..." -- since "provided with" is non-traditional, it is unclear whether Applicant intends for this language to be open or closed (e.g., as "comprising"); however, for the purpose of examination, it is interpreted as open language.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 5-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Hesselink (US 5995251).

Regarding claim 5, Hesselink discloses a hologram apparatus (title) provided with a spatial light modulator (Fig. 1: 20) having a plurality of pixels (22) two-dimensionally arranged (22) therein and irradiating coherent light (36, 38) containing therein page data (col. 4, ln. 38) to be recorded on a hologram recording carrier (26) through said spatial light modulator to record information with an optical interference pattern generated by the coherent light as a diffraction grating (i.e., the interference pattern *is* the diffraction grating as claimed here; the interference is present in the reference at col. 4, ln.18-27), wherein said spatial light modulator comprises a plurality of blocks consisting of m pixels (where m = an integral number) (22) adjacent to each other, and a boundary portion (i.e., the edges) which is provided between the adjacent blocks and has a width having at least the width of one pixel (i.e., nature of a pixel) of said spatial light modulator or of one pixel of an image detecting sensor (32) used to reproduce the recorded page data and the distance between the adjacent pixels in each of said blocks (i.e., via 23), and which shield light (i.e., encoded data).

Regarding claim 6, Hesselink further discloses a boundary generating portion (29) for driving said spatial light modulator so as to display a plurality of continuous pixels in a light shielding state as said boundary portion (col. 4, lns. 63-65).

Regarding claim 7, Hesselink further discloses said boundary generating portion groups data to be recorded into blocks per n bits (where $n < m$, and n =an integral number) (col. 4, lns. 3-4); generates page data by carrying out two-dimensional modulation for allocating m bit data to each block per n bits by referring to a modulation table (although the prior art does not specifically disclose the claimed blocks per bit by a modulation table, this feature is seen to be an inherent teaching of that device since data storage and data bits per unit volume are disclosed,

and it is apparent that blocks per bit modulation must be present for the device to function as intended); drives said spatial light modulator according to the resulting page data (i.e., this must be true in order for the data to be retrieved, see above); and adds boundary portion data for said boundary portion to each of said blocks when generating the page data (i.e., via 29).

Regarding claim 8, Hesselink further discloses said boundary generating portion (29) generates page data for a boundary portion with which said boundary portion is provided, and drives said spatial light modulator so that the page data for a boundary portion and two-dimensionally modulated data are superimposed on each other (Fig. 1: i.e., 20 and 29 adjacent/attached).

Regarding claim 9, Hesselink further discloses said boundary generating portion (29) drives said spatial light modulator so that each of said pixels of said spatial light modulator is constituted by a plurality of sub-pixels (i.e., groups of pixels), and for the pixel which should shield light (col. 4, lns. 63-65), all the sub-pixels of the pixel concerned are made in a light shielding state (col. 4, lns. 63-65), and for the pixel which should transmit light, a part of the sub-pixels of the pixel concerned is made in a light shielding state, and the remaining sub-pixels are made in a light transmitting state, and when the pixel which should transmit light is adjacent to said adjacent blocks (col. 4, lns. 63-65; i.e., continuous state), said sub-pixels of the pixel concerned in the light shielding state are arranged between the adjacent blocks so as to constitute a part of said boundary portion (i.e., edge between).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer L. Doak whose telephone number is (571)272-9791.

The examiner can normally be reached on Mon-Thurs: 7:30A-5:00P, Alt Fri: 7:30A-4:00P (EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone B. Allen can be reached on 571-272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/J. L. D./
Examiner, Art Unit 2872

/Stephone B. Allen/
Supervisory Patent Examiner
Art Unit 2872